

ViCTER: Virtual Consortium for Transdisciplinary/Translational Environmental Research



A Proposal for a New Virtual Collaborative Program

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What is ViCTER ?

- v New program to stimulate transdisciplinary/translational research
- v Scientists create virtual consortium
- v Central focus on some aspect of environmental health

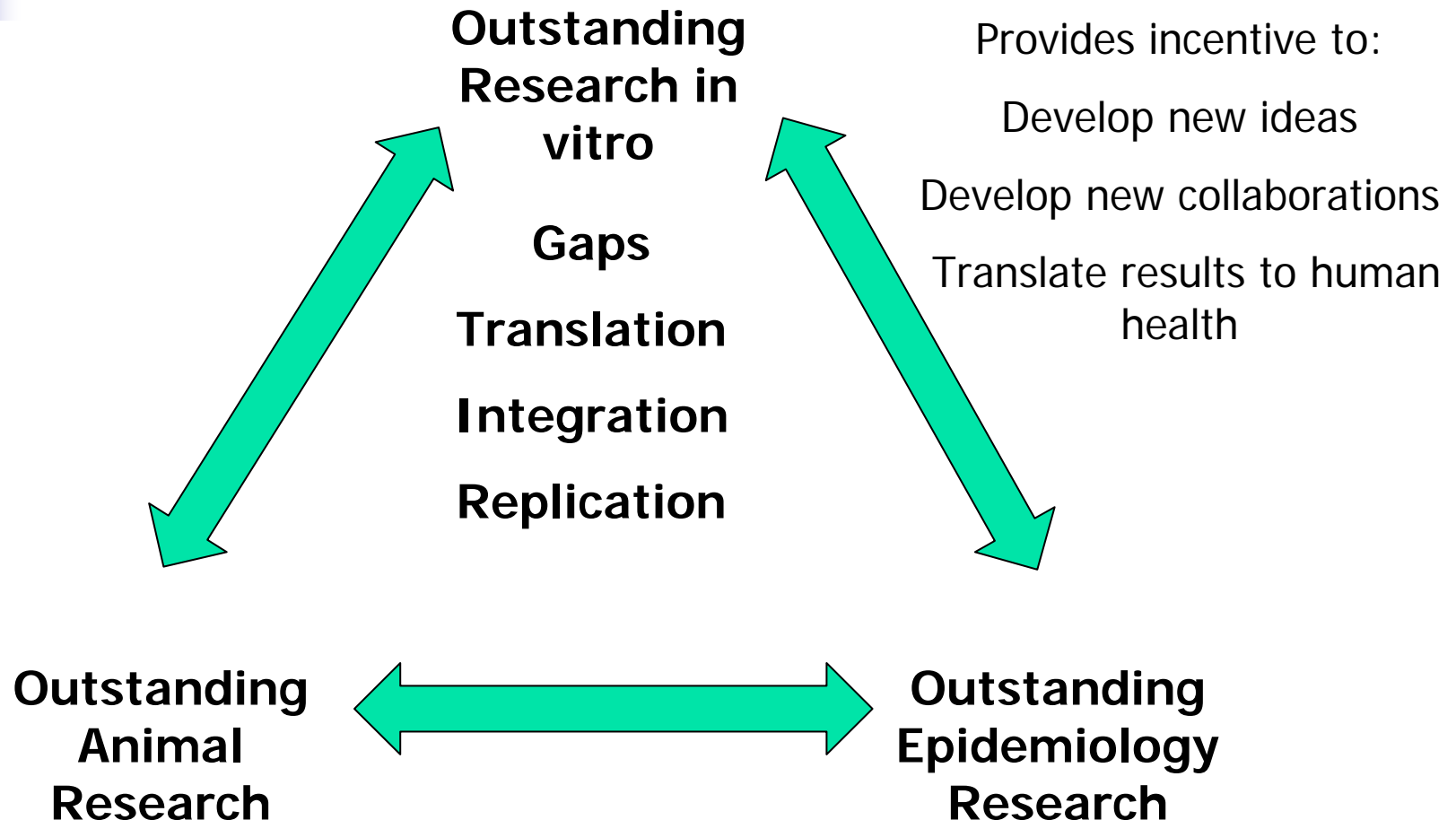


Why ViCTER ?

- **NIEHS needs** research programs
 - to stimulate translational/transdisciplinary research
 - to stimulate disease focused research
- but can't afford another the traditional large programs
- **Investigators need** a mechanism
 - to support collaborations with others to expand their research into new tissues, new toxicants, new approaches, through new collaborations with researchers in their field and other fields.
- **WIN-WIN for NIEHS and Investigators**

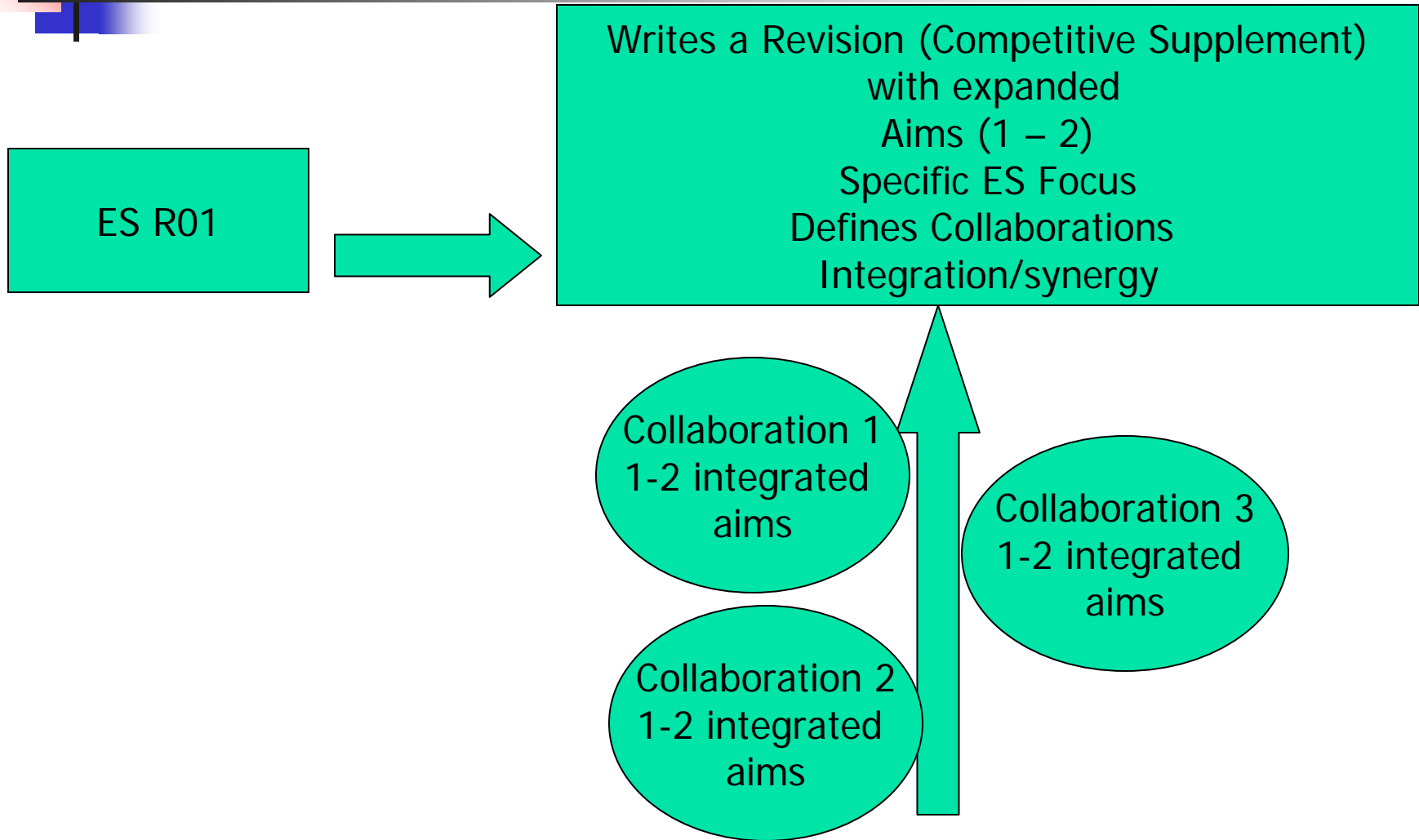


ViCTER Goal : Stimulate Collaborations to Improve Human Health





Overview of a ViCTER





For the purpose of this Initiative:

- **Transdisciplinary research** occurs when scientists from multiple disciplines work interactively on a common problem and, as a result,
develop novel cross disciplinary methods, insights, and research approaches that would not have occurred with a traditional uni-disciplinary investigation.
- **Translational research** occurs when scientists from the same or multiple disciplines work interactively on a common problem and as a result,
stimulate the bidirectional flow of information across the spectrum from in vitro, to lower animal models, to higher animal models, to human population or clinical research in order to provide data useful for the prevention and intervention of human disease.



ViCTER Funding

- **PAR with set aside**
 - Open Announcement , one receipt per yr, for 3 yrs
 - NIEHS Review
- Short, simple application and fast track review and funding (6 mo).
- Length of award would depend on needs and time remaining on original application and could be 2 or 3 years.
- THE GOAL WOULD BE 15 ACTIVE CONSORTIA OVER 3 YR.

ViCTER: BPA and Reproductive Function

Original Grant: BPA Primate Reproductive Study

Competitive Supplement:
BPA analytical capability

New Collaboration: BPA
Reproductive
Study in humans

New Collaboration: BPA
rodent
reproductive study

Examples of New Specific Aims

- Integration of multiple tissue analyses
- Compare routes of exposures
- Compare dose responses
- Compare gender differences
- Share tissues
- Measure internal doses
- Pathway analyses



Across the NIH

- NIGMS: Administrative Supplements for Collaborative Science
 - Active 3yrs, 3 times per year
 - \$135,000 max (PI and two collaborators)
- NIAMS: NIAMS Building Interdisciplinary Research Team (BIRT)
 - Research Revision RFA
 - One time submission
 - \$100,000 Max (PI and one collaborator)

ViCTER: PAHs and Lung Function

Original Grant - Clinical Research
Smokers gene-expression
in lower airways

Competitive Supplement:
Expanded study of
gene expression
and signal pathways

New collaboration:
Animal Model of PAH
action on lung

New Collaboration:
Basic Biology of Lung
Function

Examples of New Specific Aims

- ID of pathways of ROS and inflammation
- Biomarker Development
- Controlled chamber Studies
- SNPS

ViCTER: Effect of Mixture of EDCS on Growth and Development

Examples of New Specific Aims

- Estimate total estrogenic activity in human samples
- Biomarker Development
- New statistical methods for assessing mixtures

Original Grant: Epidemiology study of an EDC on growth and development

**Competitive Supplement:
To measure multiple EDCs**

**New collaboration:
Animal model for
assessing mixtures**

**New collaboration:
Biostatistician to develop
Methods for mixture studies**

**New Collaboration:
Assay for assessing
overall estrogenicity of
mixtures**

ViCTER: BPA and Cardiovascular Disease

Original Grant: Observational study on adult BPA and cardiovascular disease

Competitive Supplement:
CDC measurement of BPA
in human and rodent
serum and urine

Examples of New Specific Aims

- Compare sensitive windows
- Compare routes of exposure
- Compare metabolism/distribution
- Development of mechanism(s)
- Development of biomarkers

New collaboration:
In vitro model of BPA
effects on cultured myocytes

New collaboration:
Rodent model of
developmental exposure to
BPA and
Cardiovascular disease

New collaboration:
Rodent model of adult
exposure to BPA
and cardiovascular disease



ViCTER: Summary

- Virtual consortia
- Transdisciplinary/Translational team research
- Amenable to all EHS research areas
- PAR with a setaside (NIEHS Review)
- Simple/short application
- Fast-track review (NIEHS)
- Flexibility to direct research into specific areas in need of stimulation

\$2M annually NIEHS can support 4-5 ViCTER Consortia